



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,563	02/28/2005	Kiyoshi Ogawa	7398/84286	5005

42798 7590 07/10/2006

FITCH, EVEN, TABIN & FLANNERY
P. O. BOX 65973
WASHINGTON, DC 20035

EXAMINER

TOLAN, EDWARD THOMAS

ART UNIT	PAPER NUMBER
----------	--------------

3725

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/525,563

Applicant(s)

OGAWA, KIYOSHI

Examiner

Edward Tolan

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7-10,12 and 13 is/are rejected.
- 7) ☒ Claim(s) 3,6 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2-28-2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 15 and 16 the terms "in directions of said steel tube holding apparatus" are unclear. It is not understood as to which "directions" the claim refers as no direction has been set forth.

In claim 3, line 14 "a third hydraulic cylinder" is set forth, in line 22 "a first hydraulic cylinder" is set forth and in line 28 "a second hydraulic cylinder" is set forth. In claim 1, line 17 "a hydraulic cylinder" is set forth, is this cylinder the first, second or third of claim 3 or a different cylinder.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Filippo (6,047,584). Filippo discloses a main shaft (22) and an auxiliary shaft (96). The auxiliary shaft is driven (figs 15-17) in rotation and movable axially. The shaft (22) is

Art Unit: 3725

movable axially. Filippo teaches cutting and grinding tools (83,98,99) (figs. 14,16) and a grooving tool (93). The tools are brought into contact with the tube and grooves and cutting operations are performed. Regarding claim 14, it is inherent that a depth of cutting of the inclined cutter (83) determines a peeling or cutting operation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sczesny et al. (6,672,123) in view of Nagasawa (JP 6-63651). Sczesny discloses a combined machining apparatus (2) for machining steel tubes (17) held by a clamping device (4). The machining apparatus and clamping device are on a common mount (10). Sczesny discloses a main shaft (8) and its supports (5,6) that drive a rotating head (2) having a rolling tool (419). In figures 10 and 11 and column 6, lines 36-48 Sczesny discloses auxiliary shafts (53) carrying roller tools (51) that are driven by gearing (54). The auxiliary shafts are mounted coaxially to the main shaft in a hollow portion of support (5). In column 6, line 45 Sczesny discloses that the rollers tools (51) are movable radially inwardly and outwardly. Sczesny discloses change in roller tools with rollers (41,119,219) in order to perform different forming operations on the tube. Sczesny does not disclose a slide mount for moving the auxiliary tools radially and an

axial slide mount. Nagasawa teaches that it is known to machine a tube end with a rolling tool (15) that is movable axially on slide (60) and movable radially on slide (50). It would have been obvious to one skilled in the art at the time of invention to provide the auxiliary and/or main shaft of Sczesny with axial and radial slide means as taught by Nagasawa in order to move the rolling tools against the workpiece.

The skilled artisan would have been motivated to provide Sczesny with the tool moving slide means of Nagasawa in order to positively move the rolling tools to a machining position as opposed to moving the clamping tool toward the rolling tools.

Claims 2 and 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sczesny in view of Nagasawa and further in view of Nakai (JP 3-090220). Regarding claim 4, Sczesny discloses a variable speed electric drive motor (12). Sczesny in view of Nagasawa does not disclose rolling tools that are tilted for contacting the tube end one after the other. Nakai teaches (figs. 5 and 6) that it is known to have rolling tools (31,41) that are tilted at different angles for contacting a tube end to form an intermediate working (22) and a final flanging. It would have been obvious to the skilled artisan at the time of invention to provide the machining apparatus of Sczesny in view of Nagasawa with tilted rolling tools as taught by Nakai in order to work tube ends in a two stage operation.

Claims 5,7,8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sczesny in view of Nagasawa and further in view of Filippo (6,047,584). Sczesny in view of Nagasawa does not disclose cutting and grinding tools interchangeable with the rolling tools. Filippo teaches cutting and grinding tools (83,98,99) (figs. 14,16) and a

Art Unit: 3725

grooving tool (93) that are interchangeable for rollers in a tube forming operation. It would have been obvious to the skilled artisan at the time of invention to interchange rolling, cutting, grooving and facing tools as taught by Filippo for the rolling tools of Sczesny in view of Nagasawa in order to perform multiple tube forming operations using the driving unit.

Allowable Subject Matter

Claims 3,6 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and overcoming the 35 USC 112 2nd paragraph rejection. Claim 3 is allowable because the prior art of record does not disclose a slide frame having a front and rear slide frame, the slide frame having sliders on opposite sides thereof which are held in engagement with guide rails of a mount having a front frame, a rear frame, side frames and base frames, the guide rails which are engaged by the sliders of the slide frame being mounted on the side frames, a third hydraulic cylinder for sliding the auxiliary shaft with respect to the main shaft being fixed to the rear slide frame. Claims 6 and 11 are allowable because the prior art of record does not disclose a flexure preventing machining head unit positionally adjusted on the mount base to contact an inner surface of the tube to keep it from flexing inwardly as the tube is being worked by the second machining head.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication should be directed to Ed Tolan whose telephone number is 571-272-4525. FAX communications should be sent to 571-273-8300.

ED TOLAN
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to be 'Ed Tolan', written over the printed name and title.